Heavy Diesel Working Group

CSRA Control Measures and Implementation Strategy

August 8, 2007

Goals and Purposes

- Develop a strategy to reduce PM 2.5 impacts from heavy diesel usage in the CSRA
- Increase stakeholder participation and education
- Identify technologies for retrofits for existing engines
- Identify funding sources for retrofits

Additional Stakeholders

- Large fleets with local traffic patterns
  - Federal Express
  - United Parcel Service
  - Davis Hauling and Augusta Concrete
  - Railroad Companies
  - Others as identified
- Stakeholder Information Outlets
  - GA and SC DOT
  - Truck Stop Operators
  - Local Chambers of Commerce

Control Measures Identification

- Easy Control Measures
  - Anti-idling Policies
  - Fleet turnover
  - Biodiesel
- Hard Control Measures
  - Retrofit
  - Legislative incentives for PM reduction

Easy Control Measures

- Anti-Idling Policies
  - Pros
    - Fuel and Service Savings
    - Easy to implement
    - Newer engines can be programmed to idle for only 5 minutes.
  - Cons
    - Sometimes hard to enforce for large fleets
    - Driver education required

Easy Control Measures

- Fleet Turnover
  - New fleet turnover is 4 to 6 years; however the used trucks may stay on the road for 15 years
  - This is the process the new engine standards are intended to use
  - Though turnover is 4-15 years, low sulfur diesel and off-road diesel is becoming limited in the market

Easy Control Measures

- Use of B20 Biodiesel
  - Pros
    - 12% reduction of PM 2.5
    - Tax incentives in place
    - Use of existing infrastructure
    - Boost agribusiness and cooking oil recycling
    - “Green” business market share increase
    - Local distributor (United Energy)
    - Less engine oil changes

Easy Control Measures

- Use of B20 Biodiesel
  - Cons
    - Storage tank and fuel tank cleanout recommended prior to use
    - Initial frequent fuel filter replacement
    - Lack of “off-road” blend
    - Fuel quality standard enforcement limited
    - Engine warranty coverage limited
    - Regulatory or market pressure required to make B20 available at bulk terminals and retail marketers

Hard Control Measures

- Retrofits for existing engines
  - Technologies Available
    - Diesel Oxidation Catalysts
    - Diesel Particulate Filters
    - Catalyzed Wire-Mesh Filters
    - Crank Case Filters
  - Pros
    - Effective PM 2.5 reduction
  - Cons
    - Cost to fleets is high
    - Little or no after market availability
    - Reengineering and equipment specific design needed for older construction equipment

Implementation Strategy

- Phase 1-Stakeholder Outreach
  - Identify specific stakeholders
  - Issue a letter explaining the issue and implications of non-attainment status for the area
  - Conduct a public meeting with area COCs with media coverage
  - Provide specific information
    - Example anti-idling policy
    - Retro fit technologies and funding sources
  - Post signage and/or brochures in rest areas and truck stops about regional policies and goals

Implementation Strategy

- Phase 2-Control Measure Implementation
  - Work with participating stakeholders on easy strategies to minimize PM 2.5
  - Provide incentives for B20 storage, distribution and usage
    - Fuel filter trade outs
    - PSAs for marketers and fleets that dispense and use B20
    - Develop with enforcement strategy for fuel quality standard (ASTMD6751) with respective Dept. of Agriculture
    - Work with engine manufacturers to provide warranties
  - Urge government turnover to B20 and other alterative fuels vehicles through letter writing and/or legislative pressure

Implementation Strategy

- Phase 3- Funding Support
  - Designate a public entity (e.g., DOT, SCDHEC, GADNR) to partner with and administer available grant and/or loans form various sources for retrofits or fleet replacements
  - Promote legislative support for additional funding sources

Funding Update

- Stacey with Richmond County Schools